

there is a low humidity, which is in advance of, or coincident with, the fall in temperature.

2. The lower the humidity falls and the more violent its fluctuations, the greater will be the fall in temperature.

3. The earlier the low humidity reaches the station in advance of the fall in temperature, the longer will the period of cold last.

4. Coincident with, or shortly before the lowest temperature, the humidity usually attains a value above normal and begins to fall as the temperature begins to rise.

EVERY MAN HIS OWN WEATHER PROPHET.

By J. HOWARD HOPKINS, Ruxton, Md. (dated July 25, 1899).

The rules laid down under the above title by the Baltimore Trade have been examined by me with the following results:

The assertion that the extreme cold spells of the winter are just six months after the hottest spells of summer does not, except in one or two instances, at all agree with my own observations. I have been keeping private records for the past four or five years, making temperature my principal observation. The warmest periods of weather for June, July, and August, 1895, were certainly not followed in six months by the coldest weather for December, January, and February, respectively. To be sure it was moderately cool for the season during the first few days of December, 1895, but it was by no means the complement of the corresponding days of June, when the temperature was remarkably high for the season. The warmest period of September of that year, it is true was followed by a severe cold spell in March, but might not this have happened by mere chance? In 1896, only the cold wave of the following January corresponds to the warm period of July; June, August, and September had no cold waves during the next winter to follow their warmest periods.

In 1897 I can find nothing at all that confirms the truth of the Baltimore Trade rule.

As for 1898, December shows no cold waves that correspond to the hot weather which prevailed from June 24 to 28. January, 1898, had a severe cold wave, corresponding with the extreme heat of July 1-4 preceding, but the great cold spell of February 9-15, 1898, had no complementary hot period in August, 1897. September, 1898, had a hot spell, which was followed in March, 1899, by a period of rather cool weather but the coolness was not to be compared with the preceding excessive heat.

As regards the statements that the last week in March determines the character of the last week in September, and, that if the weather from March 22 to the end of the month is warm, there will be great danger of frosts during the last week in September, or vice versa—I find my records agree no better with this than in the previous cases, and my records are kept quite as accurately as is practicable.

A STUDY OF TEMPERATURES AT BALTIMORE, MD.

By F. J. WALZ, Local Forecast Official and Section Director.

In the Baltimore Sun of February 2, 1899, there appeared an editorial article stating that the Baltimore Trade had deduced a general rule for temperature forecasting, based on a study of the tables of temperature printed in the Sun Almanac for a number of years past. This rule, it is claimed, is based on statistics which show that from the record of spring and summer anomalies in temperature an inference may be had as to the fall and winter temperature anomalies which will follow just six months later in the same locality; in other words, the extremes in fall and winter conditions are the complement of the extremes in the spring and summer conditions immediately preceding, and the interval of

time is almost invariably a period of six months. The statement was also made that the rule could be put to practical use, which would result in much benefit in cases where business interests were likely to be affected by temperature extremes. March 22 is given as the epoch or initial date from which calculations are to be reckoned.

The temperature tables in the Sun Almanac are furnished by the Weather Bureau office in Baltimore, and are consequently official and reliable, so that no exception can be taken to the material used in the studies made by the Trade. Acting on the suggestion of the Editor of the REVIEW, whose attention to the article had been called by Mr. Howard Hopkins, of Ruxton, Md., I have carefully examined and compared the temperature records of this station for the past seven years, beginning with March 22, 1892, with a view of proving or disproving the value of the system of long-range temperature forecasting evolved by the Baltimore Trade.

In the tables which follow the facts thus obtained are presented (1) in a summary of results secured by comparing the warm and cold periods of each month with the conditions prevailing six months later; (2) by a statement of results obtained through a comparison of the warmest and coldest days of each month with the data recorded six months later; and (3) by a table showing the absolute highest and lowest temperatures for each year and the dates of their occurrence.

An exact verification is one in which an extreme of spring or summer heat or cold during a given month is followed six months later by an extreme of the opposite nature. A partial verification is one in which the extreme is followed by its opposite to a mild degree only. A nonverification, or failure, is an instance in which the Trade rule does not hold good. And an opposite result, as given in the tables, is an instance in which an extreme thermal condition has been followed six months later by an extreme of the same order.

TABLE 1.—Summary of results in testing Baltimore Trade long-range temperature forecast rule when applied to warm and cold spells of two or three days or more duration.

	Exact.	Partial.	Failure.	Opposite.
March 22-31 with September 22-31	1	4	7	8
April with October	3	6	23	4
May with November	3	10	21	9
June with December	2	10	21	3
July with January	2	12	16	3
August with February	1	3	27	2
September 1-21 with March 1-21	3	6	15	6
Total	15	51	139	35

TABLE 2.—Summary of results in testing Baltimore Trade long-range temperature forecast rule when applied to the warmest and coldest days in each month.

	Exact.	Partial.	Failure.	Opposite.
March 22-31 with September 22-31	1	3	9	1
April with October	2	5	6	1
May with November	0	5	5	4
June with December	1	7	4	1
July with January	1	5	4	4
August with February	1	4	4	3
September 1-21 with March 1-21	2	5	3	4
Total	8	34	35	18

TABLE 3.—Highest summer and lowest winter temperatures for each season, with dates of occurrence, since 1892.

Highest.		Lowest.	
	°		°
1892, July 26	99	1893, January 16	1
1893, June 20	98	1894, February 25	8
1894, June 24	98	1895, February 6	1
1895, June 1 and 3	97	1896, February 17	5
1896, August 7	98	1897, January 26	8
1897, June 30	95	1898, February 2	10
1898, July 8	104	1899, February 10	-7